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Northeast Region Green Section
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USGA GREEN SECTION TURF ADVISORY SERVICE REPORT

**DEDHAM COUNTRY & POLO CLUB
DEDHAM, MASSACHUSETTS**

August 11, 2005

Present: Mr. Michael Stachowicz, Superintendent
Mr. Gary Klencheski, Green Chairman
Mr. James E. Skorulski, USGA

INTRODUCTION

This report is provided for the Turf Advisory Service visit conducted on August 8, 2005.

It was a pleasure for me to return to conduct this visit. It has been one of the more difficult summer seasons in recent memory with record heat and very high humidity in both June and July. A continuation of that weather has created ideal conditions for disease and general stress for all grasses and, especially annual bluegrass. Annual bluegrass on greens and fairways has suffered some injury. The injury was caused by disease, insect activity and general wilt stress. Expanded areas on greens have also declined during this difficult season. These areas were examined and will be discussed in this report. We also had the opportunity to review much of the tree work that was completed since our last visit and to discuss the maintenance philosophies formulated for the golf course. This report provides a written account of the observations and discussions throughout the tour of the golf course.

GREENS

No. 18 Green

The 18th green suffered some of the more extensive damage. The damage was most severe along the front of the green (green expansion area) and along the very back of the green. We discussed a number of steps that can be taken to improve the performance of the green. The following recommendations were made:

- ▶ Remove one large sugar maple tree from the stand behind the green, to allow morning sun to reach the back half of the green. Lower branches on the remaining maple tree should be removed to allow more light and air movement to reach the back of the green. The back side of the green was in the shade at 11:30 AM at the time of this visit. The shaded turf is then subjected to hot afternoon sun, creating significant stress that leaves the turf susceptible to a number of diseases and wilt injury. We also discussed thinning the tree stand along the right of the approach to allow late morning sun to reach the green and, hopefully, increase air movement. A number of poor quality pine trees along the left side of the green should also be removed, as should two poor quality plantings behind the green, to increase air movement.
- ▶ The damaged expansion area on the green should be regrassed in early-mid September to recover the area. I would not extend the edge of the green over the crest of the hill, as this will always prove difficult to maintain. If you desire to have a false front, then regrade the rough contour and soften the ridge so that it can be better maintained. The grading changes would be completed, using the existing soil mix. Additional topdressing sand would be added, if necessary, to complete the final grade. I have enclosed a list of sod suppliers that can provide a sod that should more effectively match the greens. The poa/bentgrass mix will

blend in relatively well with the existing green. Use that sod to repair other expanded areas like those adjacent to the 8th, 9th and other greens.

- ▶ Consideration should be given to creating a small swale on the right side bank adjacent to the 18th green to divert surface water from sheeting over the green. It might be more practical to complete the swale above the hill to direct water away from the green. The location of the green is at a difficult site, not only because of the shade, but also because of its proximity to the hillside. A diversion swale and/or an interceptor drain (to remove seepage from the hill) will help keep the green dry during the early spring season.

Practice Green

The practice green continues to be a maintenance challenge. The poor surface drainage on the green, together with restricted air movement and limited internal drainage combine to create the maintenance challenge. We discussed the need to remove several maple trees to try to further improve air movement for the green. Pruning the lower branches on the maple trees may be helpful in that regard as well. The green will always have a larger population of annual bluegrass, due to its relatively small size and the traffic it receives and because of its surface drainage and location. Management programs should be aimed at maintaining the annual bluegrass. Attempts should continue to be made to overseed that green with more creeping bentgrass and the populations of bentgrass may increase in time, as the growing environment is improved. However, the green should be carefully irrigated during the season with care taken to keep it as dry as possible without creating irreversible wilt damage. The cultivation practices on this green are also important to alleviate compaction in the native soils. Use the Verti-Drain equipped with the needle tines for that purpose in the months of May and June. That practice should be extended to all of the greens to alleviate internal compaction and encourage deeper rooting. Topdressing programs for the green might have to vary slightly from the other greens, depending on the quality of the turf and its density. The topdressing frequency might be reduced to meet the slower growth rates of the turf. Nitrogen applications can be increased slightly as well, to maintain more vigor that will allow the turf to more effectively recover from the traffic it receives during the season. The fungicide programs might also be modified and intervals between applications reduced to maintain the larger populations of annual bluegrass on this green.

Probably the most effective long-term recommendation is to rebuild this green to enlarge its size and to provide a well drained root zone and the surface drainage necessary to maintain a better quality turf through the season. The green can be enlarged at the current location and perhaps, extended closer to the pro shop (if a Norway maple tree is removed). The green can also be designed with more contouring to more effectively match the greens. I would recommend establishing the practice green with your nursery sod that contains grass from the greens. This will create a more consistent surface with those greens. I would also recommend building the green

to a USGA mix and style of construction that will provide good internal drainage and that will be able to stand up to the traffic.

Crown Rot Anthracnose

There was some crown rot anthracnose disease active on annual bluegrass on a number of greens. The disease was infecting the annual bluegrass that had suffered from the weather stress. The infections were for the most part, isolated and generally, not a major concern. In fact, the infections and the selective removal of annual bluegrass provide an opportunity to replace the weaker grass with the more desirable creeping bentgrass. Hand spike and seed (with creeping bentgrass) any areas where the disease is active. The core cultivation scheduled in the coming weeks will also be an effective tool for overseeding any areas that are thin. The key with the crown rot anthracnose is to prevent it from widespread infection that could damage large populations of annual bluegrass over the greens. Fortunately, bentgrass populations are already high and the infections should be kept under control, as long as a normal fungicide program is in place. Shorten the fungicide intervals to seven-ten days during periods of hot and humid weather that continue through August. Continue to rotate the fungicides, using both penetrants and contact fungicides. Mr. Stachowicz is well aware of the effective fungicides and the application schedule appears sound.

The thatch levels in the greens can lead to more disease. The disease will also be more active in lower pockets or any recently sodded areas where annual bluegrass exists. Greens located in more pocketed environments where air movement is restricted will also experience more crown rot anthracnose activity. The tree work recommended for the 18th green will help to reduce this disease. We also discussed removing additional trees on the back right side of the 2nd green to allow more morning sun to reach the turf there. Underbrush and smaller trees should be cleared from the 8th green complex to increase air movement and reduce disease pressure there.

Water Management

Water management is critical, especially in a difficult season like this. Maintaining the greens in as dry a condition as possible is helpful for keeping the turf in a strong condition and with less disease activity in such seasons. Avoiding a saturated soil profile will allow oxygen levels in the root zone to remain high. This will allow the plant to continue to absorb water and nutrients, which are a necessity to maintain vigorous growth and transpiration that cools the plant. The oxygen is also important to maintain vigorous root growth that can absorb more water and from deeper in the profile and absorb more nutrients. The thatch layer in place absorbs water and can remain saturated. The prolonged saturation can impact oxygen levels in the soils and thus, impact root growth. Use the automatic system to recharge the moisture in the root zone on an as-needed basis. Otherwise, monitor the soil moisture in the greens closely and hand water to supplement the automatic irrigation and provide the extra water needed over the higher contours or shallower rooted areas without over watering the remainder

of the green. The staff must also be alert in regards to wilt injury. The syringing practices observed during the late morning and afternoon hours are aimed at preventing wilt on the shallower rooted turf areas.

Soil Management

The core cultivation practices are a necessity to reduce thatch to more optimal levels and to create conditions that will support a deep and vigorous root system. Core all of the greens more aggressively with 1/2" hollow tines this September. Reduce the ground speed on the machine, as much as possible, to produce the tightest spacing possible. Repeat the core cultivation with 1/2" hollow tines again in early-mid May of next season to remove even more thatch and incorporate larger volumes of sand into the root zone. The core cultivation is the best means to remove the thatch and to firm the surfaces.

Deep aerification with the Verti-Drain machine continues to be an important practice for the greens. That can be completed in late fall with a machine equipped with 1/2" solid tines. I have also observed very good success with the Verti-Drain machine equipped with 5/16" needle tines. The smaller tines allow the machine to be used more as a deep spiker that will aerify the soil profile down to a six-eight inch depth.

Utilize spiking tines to cultivate the surfaces of the greens during the summer season. The small tines are effective to break through any crusting or as an overseeding tool for thin areas.

TEES

General Maintenance

I was very impressed with the tree work that has been initiated to improve growing environments and to eliminate interference with play on the tee boxes. The work has been a good start and should be continued to remove many of the hedge plantings located near tee boxes (e.g. 16th tee and others). We also discussed the need to remove more trees around the 17th tee box so that it can be more fully utilized. Consider removing a row of trees from the left side of the back tee so that it can be enlarged further to the left. This provides a very good angle to the hole and the trees in question are of little value. We did not discuss other specific tree removals for tee boxes, as many were listed last season and Mr. Stachowicz and the green committee are aware of the needs and are addressing those on a case-by-case basis.

There is an excessive thatch level on all of the tee boxes. I realize that many unlevel teeing surfaces will be leveled. The leveling or renovation work will strip the sod and underlying thatch layer to eliminate that problem. However, continue to aggressively core aerify all of the tees at least three times or more per season, using 5/8" hollow

tines. The aggressive coring will remove thatch and surface soils that will serve as topdressing and firm the surface.

Renovation

The project to renovate and level teeing boxes is a good one that is needed. Continue to work with the contractor and select a number of tees each season for the leveling work. The leveled surfaces can be reestablished with a commercial bentgrass sod. However, I am observing very good results with a low-cut Kentucky bluegrass for teeing surfaces. This sod establishes well and can tolerate the traffic, even in semi shaded sites. The low-cut Kentucky bluegrass will be a good option for smaller tees or par-3 tees that are heavily divoted. The Kentucky bluegrass can be converted to bentgrass through regular divot repair and overseeding work.

FAIRWAYS

Drainage

It was good to see that simple repair work has been completed on a number of drain lines to once again make them effective. Old clay tiles that have been crushed or that have been silted in have been replaced and the areas are draining relatively well. The dry summer season has also been helpful with the perennially wet fairways such as the 6th. The drainage improvements on the 6th and 4th fairways are excellent and some additional drainage work will be completed on the 4th fairway to try to remove water that is seeping out of the hillside adjacent to the fairway. Well done on all accounts!

Summer Stress

The heat and humidity have taken a toll on weaker fairway areas. The existence of the thatch layer has resulted in some of the weakness and has led to the wilt injury and disease activity observed. Areas that were recently expanded also declined during the more stressful weather. Begin a campaign to core cultivate all of the weakened and damaged areas so that they can be overseeded. That work should be initiated in mid-late August or early September. Repeat the core cultivation again in mid September for additional overseeding work. The core cultivation will also be helpful to remove the thatch and rewet the underlying soils. The integrity of the surface in the damaged areas has been maintained so playing conditions are not bad. The loss of annual bluegrass in those areas provides a good opportunity to increase the more durable bentgrass populations in those areas.

Thatch Management

There is a need to continue with the aggressive core cultivation in all of the fairways. That practice should be completed in both spring and fall to remove the thatch and

surface soils that will serve as topdressing. Reducing thatch to more optimal levels cannot be completed in one or even two years. Conditions will improve with each aeration completed. Significant results will become evident over a 3-5 year period with the spring and late summer practices.

Annual Bluegrass Weevil

Annual bluegrass weevil was active in the fairway turf and responsible for some of the sporadic damage observed. The weevil has been problematic throughout the region this season because of the unusual weather in May and its impact on the emergence of the insect. The emergence of the adults was spread out over six-eight weeks, reducing the effectiveness of the insecticides applied in spring. We found all stages of the insect in several fairways. It is unlikely that the next generation of the insect will fully develop at this late point in the season. However, the larvae from the final generation will still cause feeding damage and therefore; a final application of a synthetic pyrethroid insecticide or Dursban is warranted. There is a concern with the insects developing resistance to the pyrethroid class of insecticides so it is a good idea to alternate with Dursban in future applications targeted at the egg-laying adults. Larva can be controlled with Dylox.

Conserve SC has received a label for use against annual bluegrass weevil. The insecticide will be targeted at young instar larvae. The timing for those applications is not fully understood at this point; but work is underway at UMass to determine that. Contact Dr. Patricia J. Vittum, UMass, (413) 545-0268, pvittum@ent.umass.edu to learn more about the use of Conserve SC against the early instar larvae. Monitor for the adults in the fairways next season and be prepared to make at least a band application around the fairways should the adults be observed in high numbers. A second application can follow two-three weeks later to provide a wider window of control over the emerging adults.

ADDITIONAL COMMENTS

Tall Grass Areas

I was very impressed with the tall grass roughs. The weed management programs have begun to eliminate many of the broadleaf weeds and woody materials. The herbicide applications should be continued this fall and repeated next spring to clean up the rough areas. Gallery might be applied as a pre-emergent herbicide on a trial basis to control some of the summer annual broad leaf weeds. The single spring application might eliminate the need to treat those areas later on. We also discussed continuing the removal of weedy trees that have established in some of the banks and areas that were formerly maintained as tall grass rough areas. This will make it possible to reestablish those areas to their former state. Applications of Acclaim Extra (fenoxaprop) and Drive can continue to be used to take out crabgrass and other annual grass weeds.

Map the areas where the crabgrass is now active and treat those with Dimension, Barricade or pendimethalin next spring.

It was good to see that trees are being removed to expose some of the ledge rock in the rough areas. We discussed further exposing the rock by cleaning off some of the soil and plant material, using a power washer. This will make the rock outcroppings that much more dramatic. We also discussed adding several mounds along the right side of the 12th fairway to try to separate the fairway from the adjacent green. A series of irregular mounds would be added to mirror the outcroppings along the left side of the fairway. This is not a recommendation but simply a suggestion that can be discussed with a golf course architect. Adding the mounds would eliminate the need to have trees at that location.

Trees

The tree work completed since our last visit has been excellent. We discussed some specific removal needs that are understood by the green committee and many of which were discussed last season. I will offer a general recommendation to the newly formed tree committee to simply continue with the work, as it has been initiated to this point. The staff is doing a very good job in that regard and no changes are recommended there. We also discussed planting several trees along the left side of the 14th fairway. Two poor quality white pine trees would be removed. The tupelo trees would be planted in the tall grass area that is wet. The tupelo is a wet site tree that will provide brilliant fall color and will fit the site nicely.

Sand Bunkers

We discussed the design issues with the sand bunkers in the report last season. A more recent concern with the bunkers is the playability of the sands. Some of the bunkers are softer than desired. Little can be done at this point besides removing and replacing the current sands with a better material. Continue to water greenside bunkers or any bunkers where the sands tend to dry out and become too soft. The morning irrigation should keep the sands moist and that will help their firmness. Eventually, the bunker sands will be replaced with another material that has the ability to pack tighter. A "Band-Aid" would be to remove some of the existing sand and to cap off the bunkers with the firmer material. That can be completed on an interim basis, if absolutely necessary. However, I would expect the sands to be removed and replaced if bunkers are renovated in the near future.

Cartpaths

Continue to invest annually in the cartpath system on the golf course. It was good to see that steps were taken to begin to upgrade the cartpath system and that more work is scheduled later this season. The annual investments will make it possible to upgrade the system without having to go forward with a major, costly expenditure.

CONCLUSION

Do not hesitate to contact the office if there are any questions regarding the recommendations in this report or should any questions arise through the remainder of the season. The goal at this point is to repair the damaged areas surrounding the putting greens to improve their appearance. This is especially important on the 18th green. Improving the growing environment on the 18th green should also be a top priority for the maintenance programs during the off-season. Best wishes for the remainder of the season.

Sincerely,



James E. Skorulski, Senior Agronomist
Northeast Region Green Section

JES/reh

cc: Mr. Michael Stachowicz, Superintendent
Mr. Gary Klencheski, Green Chairman
Mr. Robert Forsburg, President

Reprints: The Fall Harvest
Using New Technology to Solve an Old Problem: Trees
Against the Grain

Enclosure: Sod Nurseries